

WHAT IS CLAIMED IS:

1. A computer-implemented system, comprising:  
a request broker operable to:

receive a network API request component from a client, the network  
API request component comprising a description of a system API method to be called  
and one or more parameters to be used in executing the system API method, the  
parameters having one of a plurality of acceptable native formats;

determine the native format of the parameters; and

communicate the parameters in the native format to a selected one of a  
plurality of translators for translation of the parameters from the native format to an  
internal format, each translator being associated with a different native format; and

communicate the parameters in the internal format to an application  
server to enable execution of the system API method according to the parameters; and

the application server system, operable to receive the parameters from the  
request broker in the internal format, generate a return value reflecting execution of  
the system API method according to the parameters, and communicate the return  
value to the request broker in the internal format;

the request broker further operable to receive the return value from the  
application server system in the internal format, communicate the return value in the  
internal format to the selected translator for translation of the return value from the  
internal format to the native format, generate a network API reply component that  
comprises the description of the system API method that was called and the return  
value in the native format, and communicate the network API reply component to the  
client.

2. The system of Claim 1, wherein:

the request broker is implemented as a servlet operating at a Secure Hypertext  
Transport Protocol (HTTPS) web server; and

the network API request and network API reply components comprise Multi-  
purpose Internet Mail Extension (MIME) containers communicated over the Internet  
in HTTPS messages.

3. The system of Claim 1, wherein the system is a hub system, the client is located remote from the hub system, and the client comprises at least one of a remote application, a remote spoke, and a remote hub system.

5 4. The system of Claim 1, wherein the request broker is a component of an electronic marketplace, the client is remote from the electronic marketplace, and the client comprises at least one of a remote enterprise application, a remote spoke, and a remote electronic marketplace.

10 5. The system of Claim 1, wherein:  
the plurality of acceptable native formats comprises Extensible Markup Language (XML), Electronic Data Interchange (EDI), and JAVA formats; and  
the internal format comprises JAVA format, the parameters being converted into JAVA classes by the selected translator.

15 6. The system of Claim 1, wherein the system API method is called using a synchronous method invocation semantic.

20 7. The system of Claim 1, wherein the application server system comprises an application server and a plurality of associated adapters, the request broker communicating the parameters in the internal format to a selected one of the plurality of adapters to enable execution of the system API method according to the parameters, the selected adapter being operable to:

25 receive the parameters from the request broker in the internal format;  
communicate the parameters to the application server in the internal format for execution of the system API method according to the parameters;  
receive the return value from the application server reflecting execution of the system API method according to the parameters; and  
communicate the return value to the request broker in the internal format.

8. The system of Claim 1, wherein the application server system supports one or more applications comprising at least a collaborative planning application operable to provide planning data for one or more clients within a supply chain.

5 9. The system of Claim 1, wherein the network API request component and network API reply component each comprise a version identifier indicating the version of the network API request component and network API reply component being used.

10 10. The system of Claim 1, wherein the network API reply comprises a format field describing how to interpret the return value and corresponding to the selected translator.

15 11. The system of Claim 1, wherein the network API reply comprises a deprecation notice indicating to the client that the system API method that was called should not be further used.

20 12. The system of Claim 1, wherein the request broker is further operable to generate a network API exception component based on an exception occurring in connection with execution of a second system API method called based on a network API request component received from a second client, the network API exception component comprising a description of the second system API method, a description of the exception, and a deprecation notice indicating to the second client that the second system API method should not be further used.

25 13. The system of Claim 1, further comprising a system firewall having a plurality of ports, the system maintaining at least one port of the system firewall open for communication with the client, the client initiating a connection to the system through the at least one open port of the system firewall to communicate the network  
30 API request component to the request broker, independent of any port of a client firewall being open for communication with the system.

14. A computer-implemented method, comprising:

receiving a network API request component at a request broker from a client,  
the network API request component comprising a description of a system API method  
to be called and one or more parameters to be used in executing the system API  
method, the parameters having one of a plurality of acceptable native formats;

determining the native format of the parameters at the request broker;

communicating the parameters in the native format from the request broker to  
a selected one of a plurality of translators for translation of the parameters from the  
native format to an internal format, each translator being associated with a different  
native format;

communicating the parameters in the internal format from the request broker  
to an application server system to enable execution of the system API method  
according to the parameters;

receiving a return value at the request broker from the application server  
system in the internal format;

communicating the return value from the request broker to the selected  
translator for translation of the return value from the internal format to the native  
format;

generating a network API reply component at the request broker comprising  
the description of the system API method that was called and the return value in the  
native format; and

communicating the network API reply component from the request broker to  
the client.

15. The method of Claim 14, wherein:

the request broker is implemented as a servlet operating at a Secure Hypertext  
Transport Protocol (HTTPS) web server; and

the network API request and network API reply components comprise Multi-  
purpose Internet Mail Extension (MIME) containers communicated over the Internet  
in HTTPS messages.

16. The method of Claim 14, wherein the request broker is a component of a hub system, the client is remote from the hub system, and the client comprises at least one of a remote application, a remote spoke, and a remote hub system.

5 17. The method of Claim 14, wherein the request broker is a component of an electronic marketplace, the client is remote from the electronic marketplace, and the client comprises at least one of a remote enterprise application, a remote spoke, and a remote electronic marketplace.

10 18. The method of Claim 14, wherein:  
the plurality of acceptable native formats comprises Extensible Markup Language (XML), Electronic Data Interchange (EDI), and JAVA formats; and  
the internal format comprises JAVA format, the parameters being converted into JAVA classes by the selected translator.

15 19. The method of Claim 14, further comprising calling the system API method using a synchronous method invocation semantic.

20 20. The method of Claim 14, wherein:  
the application server system comprises an application server and a plurality of associated adapters; and

25 the method comprises communicating the parameters in the internal format from the request broker to a selected one of the plurality of adapters to enable execution of the system API method according to the parameters, communicating the parameters from the selected adapter to the application server in the internal format for execution of the system API method according to the parameters, receiving at the selected adapter the return value from the application server reflecting execution of the system API method according to the parameters, and communicating the return value from the selected adapter to the request broker in the internal format.

21. The method of Claim 14, wherein the application server system supports one or more applications comprising at least a collaborative planning application operable to provide planning data for one or more clients within a supply chain.

22. The method of Claim 14, wherein the network API request component and network API reply component each comprise a version identifier indicating the version of the network API request component and network API reply component being used.

23. The method of Claim 14, wherein the network API reply comprises a format field describing how to interpret the return value and corresponding to the selected translator.

24. The method of Claim 14, wherein the network API reply comprises a deprecation notice indicating to the client that the system API method that was called should not be further used.

25. The method of Claim 14, further comprising generating a network API exception component at the request broker based on an exception that has occurred in connection with execution of a second system API method called based on a network API request component received from a second client, the network API exception component comprising a description of the second system API method, a description of the exception, and a deprecation notice indicating to the second client that the second system API method should not be further used.

26. The method of Claim 14, further comprising:

maintaining at least one of a plurality of ports of a system firewall open for communication with the client; and

accepting a connection initiated by the client through the at least one open port of the system firewall to allow the client to communicate the network API request component to the request broker, independent of any port of a client firewall being open for communication.

27. A computer-implemented system, comprising:

means for receiving a network API request component at a request broker from a client, the network API request component comprising a description of a system API method to be called and one or more parameters to be used in executing the system API method, the parameters having one of a plurality of acceptable native formats;

means for determining the native format of the parameters at the request broker;

means for communicating the parameters in the native format from the request broker to a selected one of a plurality of translators for translation of the parameters from the native format to an internal format, each translator being associated with a different native format;

means for communicating the parameters in the internal format from the request broker to an application server system to enable execution of the system API method according to the parameters;

means for receiving a return value from the application server system at the request broker reflecting execution of the system API method according to the parameters;

means for communicating the return value in the internal format from the request broker to the selected translator for translation of the return value from the internal format to the native format;

means for generating a network API reply component at the request broker comprising the description of the system API method that was called and the return value in the native format; and

means for communicating the network API reply component from the request broker to the client.